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# United States Department of Agriculture,

✓ U. S. BUREAU OF PLANT INDUSTRY.

22 Office of Grain Investigations,

3 WASHINGTON, D. C.

## 3 KOWLIANG;

(A form of *Andropogon sorghum*.)

The kowliangs are a group of grain sorghums extensively grown in Manchuria and north China, and to a lesser extent in eastern and southern China. They are there grown primarily for the grain, which is a common article of human food. In China, where nothing is allowed to waste, the leaves and stalks are used for fodder and thatching, the stalks for fences, baskets, and fuel, and even the roots are dug for fuel. In this country they are grown for grain crops and on account of their dry, pithy stems and scanty leaves have almost no forage value in comparison with the more juicy and leafy sorghos and kafirs.

*Varieties.*—Like all groups of sorghum, the kowliangs are very variable in earliness, productiveness, height, shape and compactness of head, and color of hulls and seeds. Only early, productive varieties of medium height are desirable for use in this country. Two such are now ready for limited distribution. Brown kowliang, about 5 feet in height, has rather narrow, compact heads, with brown seeds. Blackhull kowliang, of about the same height, has somewhat looser, erect heads, white seeds, and black hulls.

*Planting.*—Kowliangs, like all sorghums, should not be planted until after the soil is warm and the danger of frost is past, usually a little later than the time for planting corn. They should be planted in rows about 3½ feet apart, using the corn planter with special sorghum plates, having smaller holes. Four pounds of seed is abundantly sufficient to sow an acre. If all grew, the stand would be eight to ten stalks per foot of row. Best yields are secured when the stalks stand two or not more than three to the running foot of row.

*Cultivation.*—For kowliangs, cultivation should be much as for corn. One or two harrowings while the plants are small and at least two cultivations at later dates are required. Additional cultivation will usually be repaid.

*Harvesting.*—Kowliangs are grown as grain crops and should be cut when the heads are thoroughly mature. They may be cut with the corn binder or even with the grain binder and cured in the shock. They may also be cut with the grain header or with the row header used for kafirs. In small areas the heads may be cut by hand.

*Thrashing.*—Like other grain sorghums, kowliangs may be thrashed in the ordinary grain separator. To prevent cracking the seed, the concaves may be replaced by boards or part of the teeth may be removed from the concaves and cylinders. The speed of the cylinder should also be reduced about one-half. If the grain is to be used for feeding stock it does not matter how much it is cracked, but cracked seed is worthless for planting.

*Feeding.*—Very little is known regarding the feeding value of kowliang grain. It is supposed, however, to be approximately equal to the grain of milo and the kafirs, which have a slightly lower feeding value than corn. It may be fed to all classes of stock. Like the kafirs it is especially desirable as a poultry feed.

*Seed selection.*—Each grower should select his own seed with care. This crop is not to be had on the market, and the present strains may be easily improved by selection. These selections should be made in the field before the crop is entirely ripe. The heads on early, uniform stalks of medium height should be chosen. Do not select the largest heads unless the stand is good. Select from the stalk that produces the largest head with the smallest row space. Do not select from suckers and in general avoid stalks which produce suckers.

*Suggestions.*—Your cooperative test is of great value not only to us but to you and to your part of the State. Give your plot no less and no more than good field care, but keep accurate records of dates and yields. When the experiment has been completed by the thrashing and weighing of the grain, send in your report, with 2 or 3 pounds of the seed. We reserve the right to call for as much seed as we furnish you. This crop should be carefully compared for earliness, drought resistance, yield, etc., with other grain sorghums and corn grown in your neighborhood.





